

Patent
Application No.: 10/820,252
SFTGB Docket No.: 19308.0027U1
03SKY0033

AMENDMENTS

This listing of claims replaces all prior versions and listings of claims in the application.

1 1. (Currently amended) A system for synchronizing a portable
2 transceiver to a network, comprising:
3 a crystal oscillator;
4 a frequency synthesizer adapted to receive an output of the crystal oscillator;
5 logic coupled to the crystal oscillator, the logic configured to estimate a
6 frequency error of a received signal, the frequency error determined by a comparison
7 of the received signal from the network with the output of the crystal oscillator; and
8 a first control signal supplied from the logic to the frequency synthesizer, the
9 first control signal configured to adjust the frequency synthesizer to compensate for
10 the frequency error.

1 2. (Original) The system of claim 1, further comprising:
2 tuning circuitry coupled to the crystal oscillator, the tuning circuitry having a
3 limited adjustment capability; and
4 a second control signal supplied from the logic to the tuning circuitry, the
5 second control signal configured to adjust the tuning circuitry, the tuning circuitry
6 configured to compensate for the error.

1 3. (Original) The system of claim 2, wherein the adjustment of the
2 frequency synthesizer adjusts the timing of the portable transceiver with respect to a
3 communication network.

1 4. (Original) The system of claim 2, wherein the timing adjustment
2 comprises adjusting the timing of a transmitter, a receiver, a coder/decoder
3 (CODEC) and a sleep calibration element.

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1 5. (Original) The system of claim 3, wherein the tuning circuitry
2 comprises a digital-to-analog converter.

1 6. (Original) The system of claim 3, wherein the tuning circuitry
2 comprises a capacitance array.

1 7. (Original) The system of claim 6, wherein the capacitance array
2 comprises fixed capacitance.

1 8. (Original) The system of claim 6, wherein the capacitance array
2 comprises variable capacitance.

1 9. (Original) The system of claim 8, wherein the adjustment
2 capability of the capacitance array can tune the system to between ± 2 parts per
3 million (ppm) and ± 2.5 ppm with respect to the frequency and timing of the
4 communication network.

1 10. (Currently amended) A method for synchronizing a portable
2 transceiver to a network, comprising:
3 determining a frequency error of a signal received by the portable transceiver
4 when compared to a frequency generated within the portable transceiver; and
5 if the frequency error is less than a predetermined value, adjusting the
6 frequency of the system by adjusting a frequency synthesizer to compensate for the
7 error.

1 11. (Original) The method of claim 10, further comprising:
2 adjusting the frequency of the crystal oscillator by adjusting a tuning circuit
3 associated with the crystal oscillator.

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1 12. (Original) The method of claim 11, wherein the adjustment of the
2 frequency synthesizer adjusts the timing of the portable transceiver with respect to a
3 communication network.

1 13. (Original) The method of claim 12, wherein the timing
2 adjustment comprises adjusting the timing of a transmitter, a receiver, a
3 coder/decoder (CODEC) and a sleep calibration element.

1 14. (Original) The method of claim 12, further comprising using a
2 digital-to-analog converter (DAC) to adjust the frequency of the crystal oscillator.

1 15. (Original) The method of claim 12, further comprising using a
2 capacitance array to adjust the frequency of the crystal oscillator.

1 16. (Original) The method of claim 15, further comprising using a
2 fixed capacitance array.

1 17. (Original) The method of claim 15, further comprising using a
2 variable capacitance array.

1 18. (Original) The method of claim 17, wherein the adjustment
2 capability of the variable capacitance array tunes the system frequency to between ± 2
3 parts per million (ppm) and ± 2.5 ppm of the frequency of the communication
4 network.

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1 19. (Currently amended) A system for synchronizing a portable
2 transceiver to a network, comprising:

3 means for determining a frequency error of a signal received by the portable
4 transceiver when compared to a frequency generated within the portable transceiver;
5 and

6 means for adjusting the frequency of the system by adjusting a frequency
7 synthesizer to compensate for the frequency error ~~if~~ when the frequency error is less
8 than a predetermined value.

1 20. (Original) The system of claim 19, further comprising:

2 means for adjusting the frequency of the crystal oscillator by adjusting a
3 tuning circuit associated with the crystal oscillator.

1 21. (Original) The system of claim 20, wherein the adjustment of the
2 frequency synthesizer adjusts the timing of the portable transceiver with respect to a
3 communication network.

1 22. (Original) The system of claim 21, wherein the timing
2 adjustment comprises adjusting the timing of a transmitter, a receiver, a
3 coder/decoder (CODEC) and a sleep calibration element.

1 23. (Original) The system of claim 21, wherein the means for
2 adjusting the frequency of the crystal oscillator comprises a digital-to-analog
3 converter (DAC).

1 24. (Original) The system of claim 21, wherein the means for
2 adjusting the frequency of the crystal oscillator comprises a capacitance array.

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1 25. (Original) The system of claim 24, wherein the capacitance array
2 comprises a fixed capacitance array.

1 26. (Original) The system of claim 24, wherein the capacitance array
2 comprises a variable capacitance array.

1 27. (Original) The system of claim 26, wherein the adjustment
2 capability of the capacitance array tunes the system frequency to between ± 2 parts
3 per million (ppm) and ± 2.5 ppm of the frequency of the communication network.